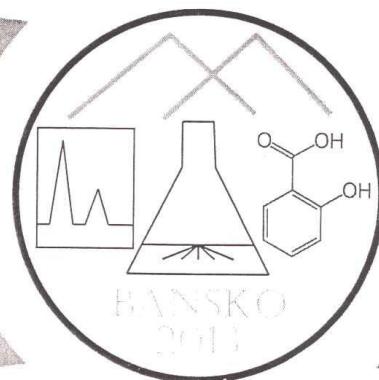


INTERNATIONAL CONFERENCE ON NATURAL PRODUCTS UTILIZATION: FROM PLANTS TO PHARMACY SHELF



ICNPU, 3-6 November 2013
Bansko, BULGARIA



INTERNATIONAL CONFERENCE ON
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From Plants to Pharmacy Shelf
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AN ETHNOPHARMACOLOGICAL AND TOXICOLOGICAL REVIEW OF *Ecballium elaterium* (L.) A. RICH

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Ecballium elaterium (L.) A. Rich. (also known as squirting or exploding cucumber) is a weedy plant that belongs to the Cucurbitaceae family. The roots and juice of its fruits were used in our traditionally medicine against rheuma and sinusitis. This plant, and especially its fruit, is poisonous. The work reviews and analyses the traditional use, biological activities with the corresponding chemical constituents, and toxicological data on *Ecballium elaterium* species. Data regarding squirting cucumber was collected using electronic databases and library search for selected peer-reviewed articles. Additional information on traditional use and botany was obtained from published books. The review encompasses literature, mainly regarding biological activity and toxicological data, from 1950 until 2013. *Ecballium elaterium* has been used in Asian, and European traditional medicine mainly against inflammation, treatment of epilepsy, treating malaria, rhinosinusitis in various forms. *In vivo* and *in vitro* testing of plant extracts and isolated compounds determined diverse biological activities including anti-inflammatory and antihepatotoxic activity. Cucurbitacin B from *Ecballium elaterium* has a significant anti-inflammatory activity and preventive and curative effects against CCl₄-induced hepatotoxicity. Immunomodulatory activity was observed on cucurbitacin E isolated from *Ecballium elaterium*. Squirting cucumber containing various cucurbitacins, which cause diarrhea and enteritis. In the ancient world it was considered to be an abortifacient. *Ecballium elaterium* extract may have the potential to induce genotoxicity, allergic reactions, renal and heart failure, keratoconjunctivitis and well-defined edematous areas in the eyes.

References

- ¹ Marchetti G (1950) Treatment of cervicitis with local application of *Ecballium elaterium* in pure powdered form and in oil. Riv Ostet Ginecol. 32(3): 143-145.
- ² Abdulazim S Salhab (2013) Human Exposure to *Ecballium elaterium* Fruit Juice: Fatal Toxicity and Possible Remedy. Pharmacology & Pharmacy 4: 447-450.